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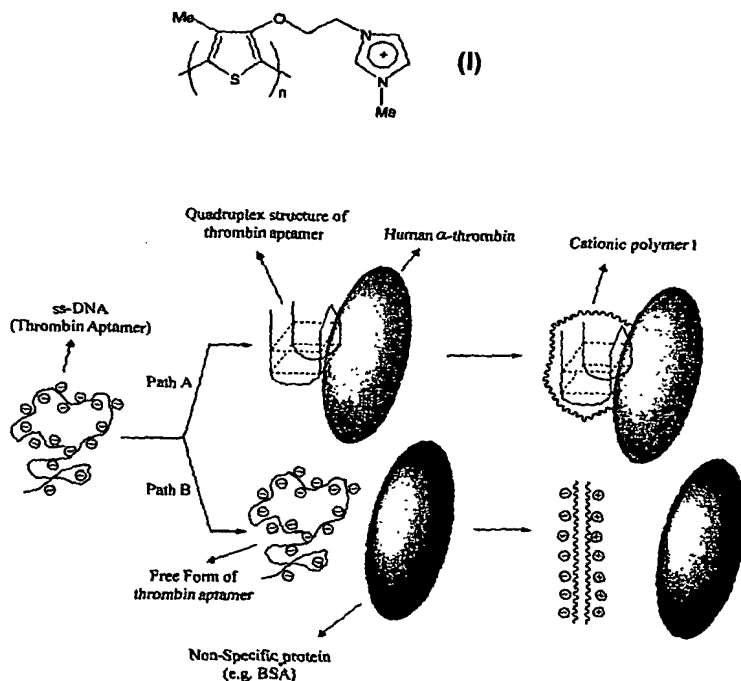
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[Continued on next page]

(54) Title: OPTICAL SENSORS BASED ON HYBRID APTAMER/CONJUGATED POLYMER COMPLEXES

(57) Abstract: An optical sensor for
detecting a target comprising a singlestranded
aptamer complementary to said target, and
a water-soluble cationic polythiophene
derivative of the following formula (I)
wherein "n" is an integer ranging from 6 to
100, is disclosed. The optical sensor allows
for the detection of targets selected from the
group consisting of potassium ions, small
organic molecules, amino acids, proteins,
whole cells and nucleotides. The detection
is based on the formation of hybrid anionic
aptamer/cationic polythiophene complexes.



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